GREEN EMITTING PHOSPHOR MATERIAL AND PLASMA DISPLAY PANEL USING THE SAME

ABSTRACT OF THE DISCLOSURE

A green emitting lanthanum aluminate phosphors activated with manganese and alkali halide for plasma display panels (PDP) having an empirical formula:

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La_{2-x-v}B₂₂O₃₆: Mn_x·A_v

wherein: A = Li, Na or K; B = Al or Al+Ga; and $0.01 \le x \le 0.1$ and $0.01 \le y \le 0.1$

is provided. The phosphor has a band emission in green region, peaking at 515nm when excited by 147 and 173nm radiation from Xenon gas mixture, a uniform particle size distribution (0.01 to 10 microns), which is a size distribution appropriate for thin phosphor screens required for a variety of flat panel display and lamp applications. They exhibit high brightness, good color saturation, good stability and shorter persistence under VUV excitation.